



THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT

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March 10, 2011

Division of Endangered Species – Permits
US Fish and Wildlife Service, Region 2
PO Box 1306
Albuquerque, NM 87103

Dear Permits Administrator:

Enclosed is the Arizona Game and Fish Department's annual report for TE-083636-0, our incidental take permit for the Safe Harbor Agreement for Topminnow and Pupfish in Arizona (SHA).

If you have further questions or comments on the enclosed material, please call (623-236-7740) or email: jsorensen@azgfd.gov . Thank you.

Sincerely,

Eric S. Gardner
Nongame Branch Chief

cc: Steve Spangle, FWS-AESO
Doug Duncan, FWS-AESO

Enclosure

**ARIZONA GAME AND FISH DEPARTMENT'S
SECTION 10(A)1(A) PERMIT ANNUAL REPORT 2010**

TE-083636-0

Topminnow and Pupfish SHA Statewide

Note: Tasks identified below are from the Department's 2009-2010 Operational Plan Report. Information covers the Department's fiscal year 2010 (July 1, 2009 to June 30, 2010).

Cumulative total of Cooperators enrolled under the SHA at the end of Fiscal Year 2010: 9

Cumulative total of populations being managed under the SHA during FY 2010: 10

Landowner:	Site:	Species Stocked:
Private	Timbucktwo Pond, Ruby	Gila topminnow
Maricopa County Parks & Recreation Department	Pemberton Pond, McDowell Mtn Regional Park	Gila topminnow & desert pupfish
Maricopa County Parks & Recreation Department	Nursery Tank, McDowell Mtn Regional Park	Desert pupfish
Maricopa County Parks & Recreation Department	Willow Springs, White Tanks Mtn Regional Park	Gila topminnow (failed site)
Maricopa County Parks & Recreation Department	Spur Cross Solar Oasis	Gila topminnow & desert pupfish
Private	Hernbrode Pond, Tucson	Desert pupfish (Rio Sonoyta origin, not QBQ)
Private	Onofryton Pond, Phoenix	Desert pupfish (Rio Sonoyta origin, not QBQ)
Arizona Game & Fish Commission	Swimming Pool Pond, Robbins Butte Wildlife Area	Gila topminnow
Arizona Game & Fish Commission	Twin Tanks, Robbins Butte Wildlife Area	Desert pupfish
Arizona Game & Fish Commission	Stop Sign Tank, Robbins Butte Wildlife Area	Gila topminnow
Vail School District	Cienega High School Pond	Gila topminnow

Management activities that were implemented during FY 2010 include the evaluation, stocking, and/or monitoring of the above sites under the SHA, and the evaluation of additional sites for future enrollment. In FY10, Department staff evaluated several sites for enrollment, including: Terry Morgan Pond (Portal); Besh ba Gowah Botanical Park (City of Globe); Appleton-Whittell Research Ranch (Elgin); Nina Mason Pulliam Rio Salado Audubon Center ponds (Phoenix); Kei Sundt Pond (Thatcher); John Scheuring Pond (Tucson); Dale Keiser Pond (Wickenburg); and Utery Mountain Regional Park (Phoenix).

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Funding sources for activities associated with site evaluations, enrollment, and stocking of topminnow and/or pupfish under the SHA include: Arizona Heritage Fund; State Wildlife Grant; Arizona Game and Fish Fund; and CAP Funds Transfer Program.

Topminnow / Pupfish

The Statewide SHA for Topminnow and Pupfish was finalized and signed by the Department and USFWS on March 12, 2008. A total of 3 new sites were enrolled and stocked under the SHA in FY10.

1. **Timbucktwo Pond**, a privately-owned pond in southern Arizona was first stocked with Redrock Canyon lineage Gila topminnow September 3, 2008.

Current Status – No monitoring activities took place in FY10.

2. **Pemberton Pond** at the McDowell Mountain Regional Park (Maricopa County Parks and Recreation Department [MCPR]) was stocked with Gila topminnow (n=21) on July 9, 2009, and desert pupfish (n=51) on October 15, 2009. This was to augment the initial stocking performed on March 13, 2009. The topminnows were of Cottonwood Spring lineage and the pupfish were Santa Clara Slough lineage. Also on October 15, 2009, 33 Gila topminnow were moved from the pond to the cement trough. No mortalities occurred during these activities.

Current Status – During monitoring on October 15, 2009, hundreds of topminnow were seen actively swimming in the pond and desert pupfish are considered established. One year post-stock monitoring occurred on June 17, 2010, and topminnow and pupfish were sampled with 19 collapsible minnow traps and a straight seine. A total of 104 desert pupfish and 82 Gila topminnow were observed.

3. **Spur Cross Solar Oasis** at the Spur Cross Natural Conservation Area (MCPR) was stocked on October 19, 2009. Department staff monitored the repatriated population of Gila topminnow in Spur Cross Solar Oasis, 918 Gila topminnow were captured, 21% of which were <1 cm TL. Three longfin dace were also captured. On June 23, 2010, Department staff again surveyed Spur Cross Solar Oasis pond to monitor the stocked populations of Gila topminnow, desert pupfish, and longfin dace. Ten collapsible minnow traps were set for 2-3 hours. We captured: 1610 Gila topminnow (1214 adults and 396 juveniles), 325 desert pupfish (231 adults and 94 juveniles), and 72 longfin dace (62 adults and 10 juveniles). Eight juvenile topminnow died during the process. On November 18, 2009, Department staff stocked 159 desert pupfish from Dexter into Spur Cross Solar Oasis. No mortalities during stocking and tempering.

Current Status – Longfin dace, pupfish, and topminnow were observed June 23, 2010 and were found healthy and reproducing.

March 10, 2010

4. **Hernbrode Pond**, is a privately-owned pond in Tucson that was stocked in FY09 with desert pupfish (Rio Sonoyta origin, that previously were illegally stocked at the Appleton-Whittell Research Ranch, and now reside at this location under the SHA). Monitoring by Department staff occurred on October 31, 2009. Dozens of the pupfish were visible and most were active.

Current Status - 1 year monitoring was done on March 19, 2010. Dozens of pupfish were visible and active. Recent genetic work indicates these fish are a pure (although severely bottlenecked) stock of Rio Sonoyta origin. As such, they take on much greater value than previously attributed, as the only stock of Sonoyta pupfish from the Rio Sonoyta proper in the United States.

5. **Onofryton Pond**, is a privately-owned pond in Phoenix that was stocked on September 29, 2009, with 220 desert pupfish (Rio Sonoyta origin, that previously were illegally stocked at the Appleton-Whittell Research Ranch, and now reside at this location under the SHA). Pupfish from the Hernbrode Pond were collected and transported to stock this site. Transport water was tempered with receiving pond water, prior to stocking fish. There were no mortalities due to handling or transport. Pupfish were active and behaved normally upon release in this large backyard pond.

Current Status – No monitoring activities took place in FY10.

6. **Cienega High School Pond** in the town of Vail was stocked with over 200 Gila topminnow on November 9, 2009, from Davison Pond in Tucson (after that pond had received new founders from Cienega Creek) under the SHA for topminnow and pupfish. It was previously stocked with longfin dace.

Current Status – No monitoring activities took place in FY10.

- 7-9. **Robbins Butte Wildlife Area**, a 1681-acre property managed for public use and owned by the Arizona Game and Fish Commission, was stocked multiple times this year. On November 17, 2009, AGFD CAP, Nongame, and Region VI staff with the help of individuals from the Department of Corrections Juvenile Facility stocked 639 Gila topminnow at **Swimming Pool Tank** and 128 desert pupfish at **Twin Tanks**. The Gila topminnow came from Dexter National Fish Hatchery and Technology Center (Sharp Spring lineage) via Bubbling Ponds Fish Hatchery. The desert pupfish were collected from Boyce Thompson Arboretum, Deer Valley High School, Desert Botanical Gardens, Phoenix Zoo, and Dexter via Bubbling Ponds Fish Hatchery. The Gila topminnow were transported to Swimming Pool Tank in a large CAP tank and the desert pupfish were transported in coolers. A total of 1 Gila topminnow and 2 desert pupfish died during transport. The fish were tempered to the pond water before stocking. Tempering at Swimming Pool Tank consisted of two water exchanges that were 10 minutes apart and tempering at Twin Tanks consisted of two water exchanges that were 20 minutes apart. Fish behaved normally upon release.

March 10, 2010

A second stocking of 571 Gila topminnow took place on April 27, 2010, at **Stop Sign Tank**. The fish were transported in coolers from Deer Valley High School. A total of 4 fish died during transport. The fish were tempered to the pond water before stocking (consisting of three water exchanges that were 10 minutes apart). Fish behaved normally upon release.

Current Status – First visual monitoring was done December 23, 2009, and fish were reported doing well. The topminnow and pupfish in all stock locations were reported as active and reproducing with multiple age classes observed during the April 27, 2010, augmentation stocking where 38 topminnow were captured at Swimming Pool Tank and 51 pupfish were captured at Twin Tanks. One year monitoring will take place in November 2010.

10. **Willow Springs** at the White Tanks Mountain Regional Park (MCPR) was monitored on October 30, 2009. Department staff surveyed the SHA-stocked population of Gila topminnow and found the spring pool was dry, and the population extirpated. This site was previously believed to be perennial, and this was the first time in over a decade of visiting the site that it was dry.

Current Status – This is considered a failed site.

11. **Nursery Tank** at the McDowell Mountain Regional Park (MCPR) was stocked with 240 desert pupfish on June 17, 2010. The fish were collected at Boyce Thompson Arboretum from June 14 thru 16. There were 8 mortalities during capture, holding and transport, all the fish behaved normally upon release. This stocking was meant to establish a refuge population of Boyce Thompson Arboretum pupfish at McDowell Mountain Park.

Current Status – No monitoring activities took place during FY10. Six month post-stock monitoring is planned for October 2010.

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